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ATTACHMENT

A. Statement of Work

1. TASK I - Expansion of HYTRAK data base.

a. Expand the data base capacity to accommodate 2,000 records in each country file.

b. Make the necessary software modifications for processing the expanded data base.

2. TASK II - Maintenance of Phase II HYTRAK system.

a. Provide assistance as required to CRS and OSR personnel in the operation and maintenance of the Phase II HYTRAK system.

3. TASK III - Documentation of Phase II HYTRAK system.

a. Provide complete documentation describing in detail all Phase II improvements to the HYTRAK system in the areas of operation, maintenance, internal programming, and data base specifications.

B. Cost

[redacted] 25X1A1a

C. Completion Date

Sixty days after receipt of contract.

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20 FEB 1969

MEMORANDUM FOR: Deputy Director for Intelligence

THROUGH : DDI Planning Officer

SUBJECT : Request for Approval of ADP Project HYTRAK

1. Problem

A primary responsibility of the Defensive Missiles Branch is to maintain current order-of-battle information on Soviet defensive missile systems, including over 2000 facilities in 15 countries. Required information includes type of facility, location, function, operational status -- past and present -- and any unique attributes of the facility. The data are the basis for much of the analysis performed in the Branch, including the evaluation, costing and projecting of Soviet air and ballistic missile defense systems.

2. Current Method

A SAM order-of-battle file is maintained by one SF/D analyst, with the assistance of OCS. The file was initiated about five years ago and provides a means for maintaining organized locational data. The usefulness of this system is limited, however, by time consuming updating procedures and the lack of automatic data retrieval programs. Consequently, several card files and charts are used to provide descriptive data. Maintenance of all the files requires almost the entire time of one analyst.

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3. Proposed System

Our objectives in developing HYTRAK are: 1) to have a file of Soviet SAM facilities with complete descriptive data, 2) to improve greatly our capability to review, sort, and correlate these data, and 3) to reduce the analyst time required to maintain the data on Soviet SAM systems. The proposed system will use an IBM 2260 display console linked to the CRS computer. The system will allow data to be entered into the machine file through the 2260. The display console will also provide access to the data file through a series of analyst directed queries.

4. Advantages of Proposed System

The capability to maintain and query a file on-line will reduce analyst time devoted to updating the file and provide more time for research. The data retrieval programs being implemented in HYTRAK will allow us to conduct more intensive research on several aspects of Soviet air defense systems.

5. Estimated Resources

a. Contractor Funding 25X1A5a1

Funding for system development is included in an ORD contract with [redacted] The contract will cover the entire development period through June 1969.

b. SF/D Personnel

25X1A5a1 [redacted] SF/D analysts, with the assistance of [redacted] have completed preliminary system definition, including the data elements and format of the file. Formatted data sheets are now being completed for an initial data base. This activity requires about 40 analyst-hours.

c. CRS Personnel, Facilities, and Costs

We require about 35 hours of keypunch operations at CRS by the end of February 1969. Additional keypunch requirements, totaling 45 to 65 hours, will come between April and July when we expand the data base. In addition about one-eighth of a work year by a system analyst will be devoted to coordinating all activities during system development.

Requirements for facilities include access to a 2260 console, S/360 computer and auxillary equipment required to operate the HYTRAK system.

In February we expect to have the capability to begin testing the on-line system using the IBM 2260 console. Development during February and March will require exclusive use of the 360/40 for approximately 25 hours. The remaining 175 hours of development and test time will require the allocation of about one-half of the 360's memory. In May 1969 when the system will become operational, a current North Vietnam SAM order-of-battle file will be in the data base and we will start to construct a similar file for the USSR. Beginning in June we anticipate using the system an average of 15-20 hours per week during prime time. The scheduling of this time can be negotiated with CRS on a weekly basis. By fall we shall have established a pattern of use for the system and we may then begin to use the 2260 console which will be located in the OSR area.

6. ADP Plan

The HYTRAK system was not included specifically in the OSR five-year ADP plan, which was submitted in December 1968. OSR requirements for a computer based system utilizing a small display console, however, were outlined in the plan in connection with QUIKTRAK. HYTRAK will replace the SAM order-of-battle file which was included in the five-year plan.

7. Outlook

We anticipate extensive and continued use of the system when it is fully operational and contains data bases for all Soviet defensive missile systems on a worldwide basis. The HYTRAK system will complement the AXMASTER system, which provides the analyst with an automated system to study weapons deployment with the projection of maps and symbology on the BR-90 display console.

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[redacted]

BRUCE C. CLARKE, Jr.
Director
Strategic Research

APPROVED:

Deputy Director for Intelligence — Date